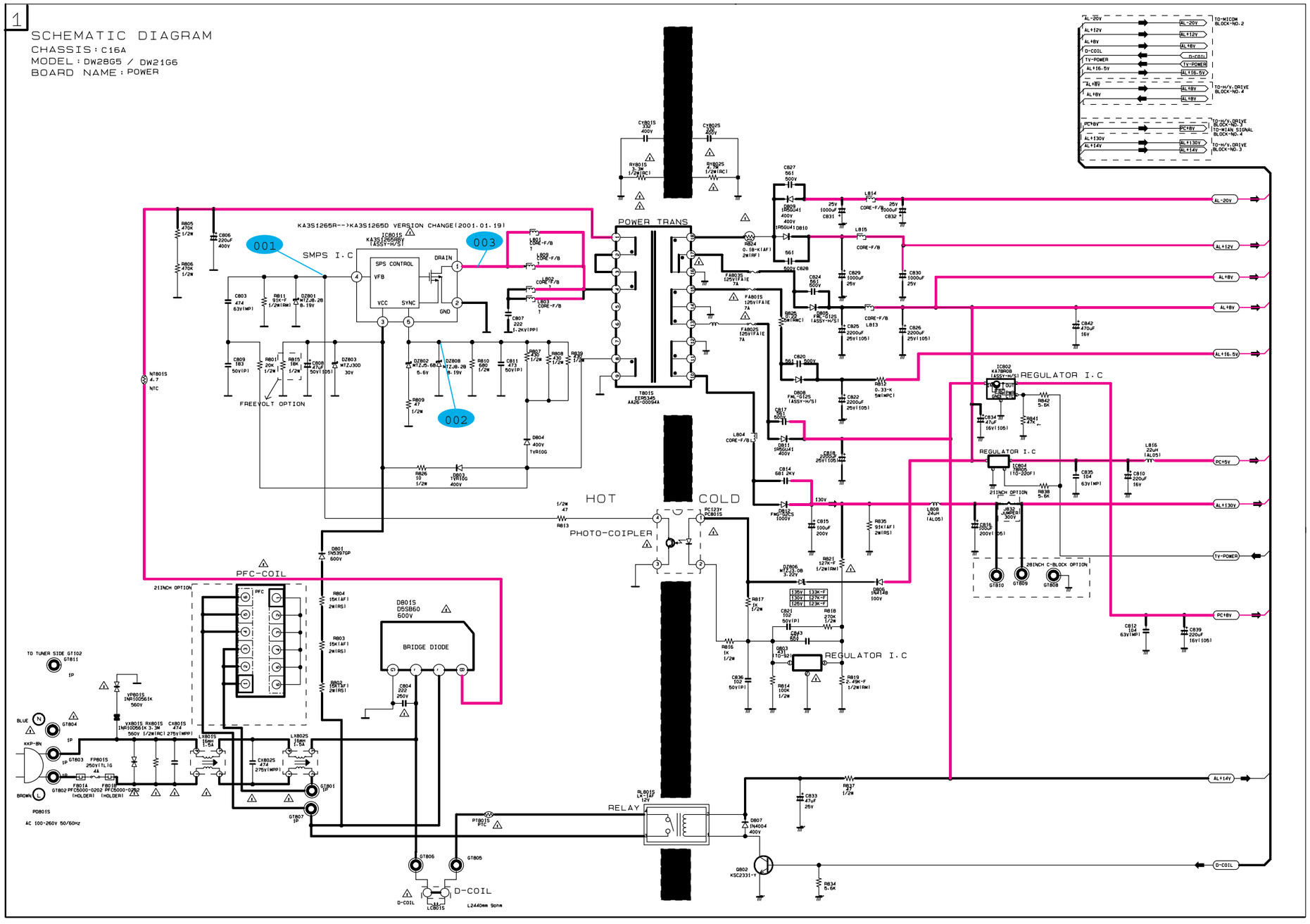
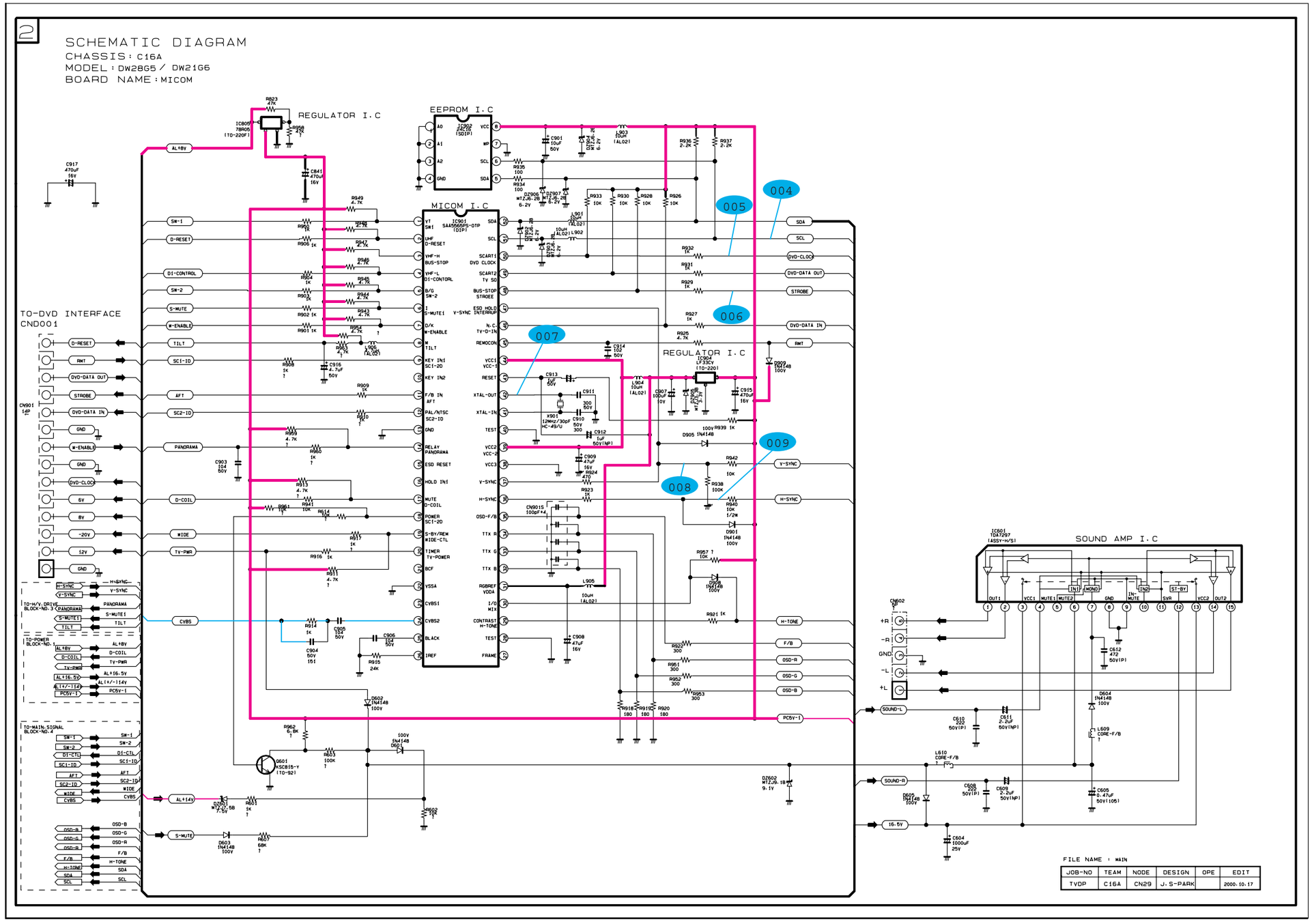
9. Schematic Diagrams

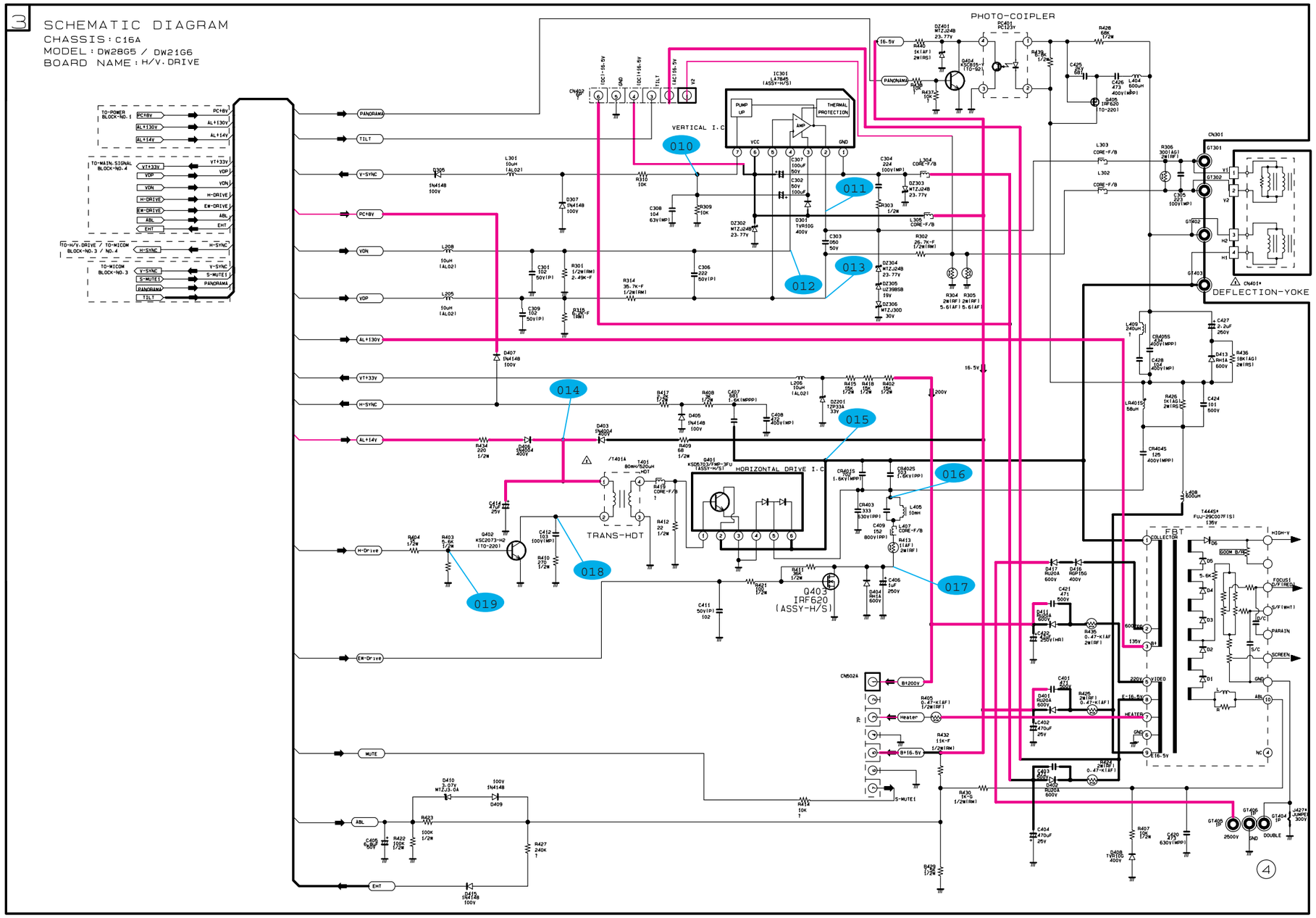
9-1 POWER BLOCK



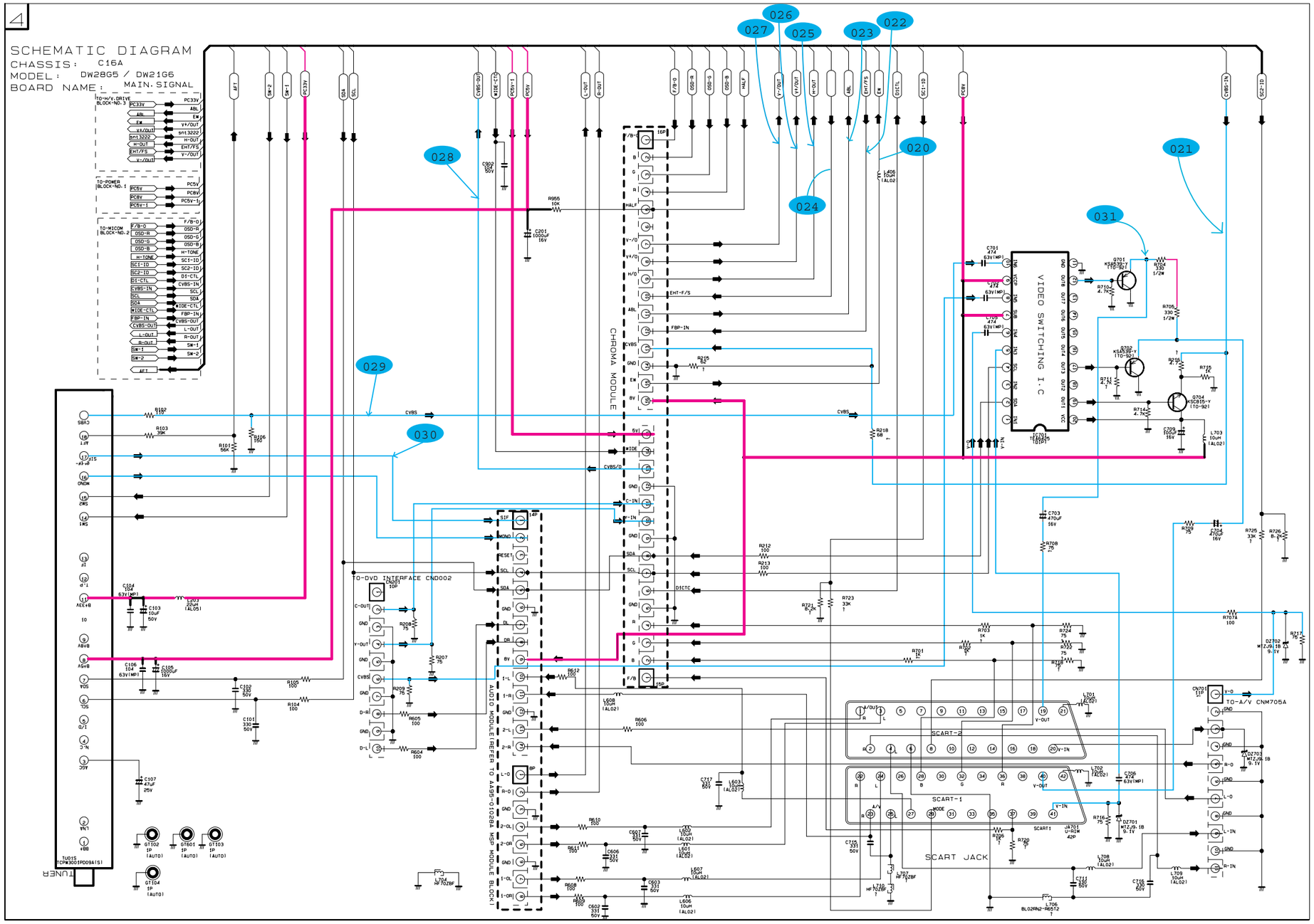
MICOM


2
SCHEMATIC DIAGRAM
CHASSIS : C16A
MODEL : DW28G5 / DW21G6
BOARD NAME : MICOM
REGULATOR I.C
EEPROM I.C
MICOM I.C
TO-DVD INTERFACE
CND001
TO-M/V DRIVE BLOCK-NO.3
TO-POWER BLOCK-NO.2
TO-MAIN.SIGNAL BLOCK-NO.4
004
005
006
007
008
009
REGULATOR I.C
SOUND AMP I.C
FILE NAME : MAIN
JOB-NO | TEAM | NODE | DESIGN | OPE | EDIT
TVDP | C16A | CN29 | J.S-PARK | | 2000.10.17

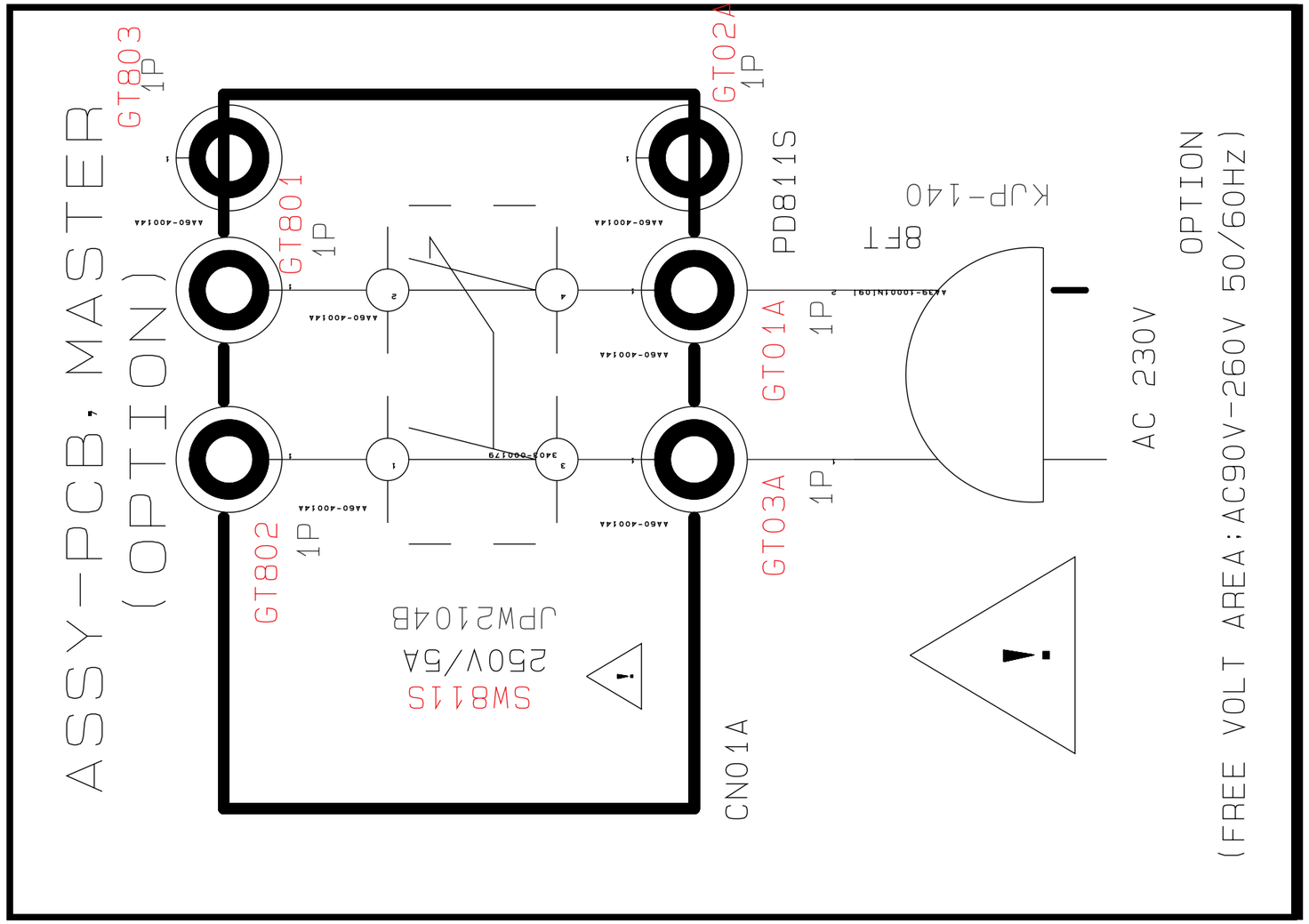
H/V DRIVE


SCHEMATIC DIAGRAM
CHASSIS : C16A
MODEL : DW28G5 / DW21G6
BOARD NAME : H/V. DRIVE
PHOTO-COIPLER
VERTICAL I.C
HORIZONTAL DRIVE I.C
TRANS-HDT
DEFLECTION-YOKE
FBT
010
011
012
013
014
015
016
017
018
019
PANORAMA
TILT
V-SYNC
PC+8V
VDN
VDP
AL+130V
VT+33V
H-SYNC
AL+14V
H-Drive
EW-Drive
MUTE
ABL
EHT
S-MUTE1
Heater
B+200V
B+16.5V

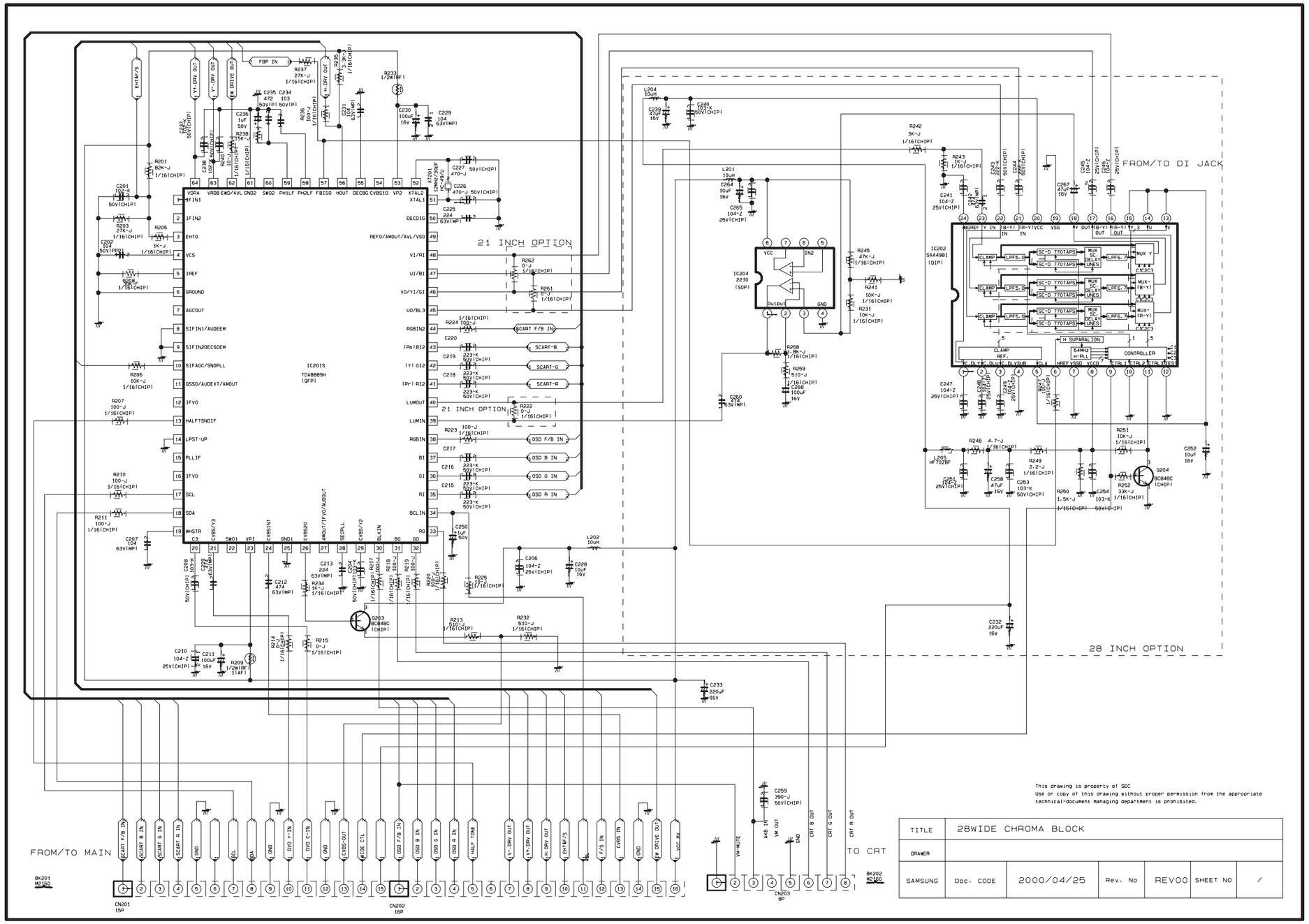
SIGNAL BLOCK



9-2 MASTER

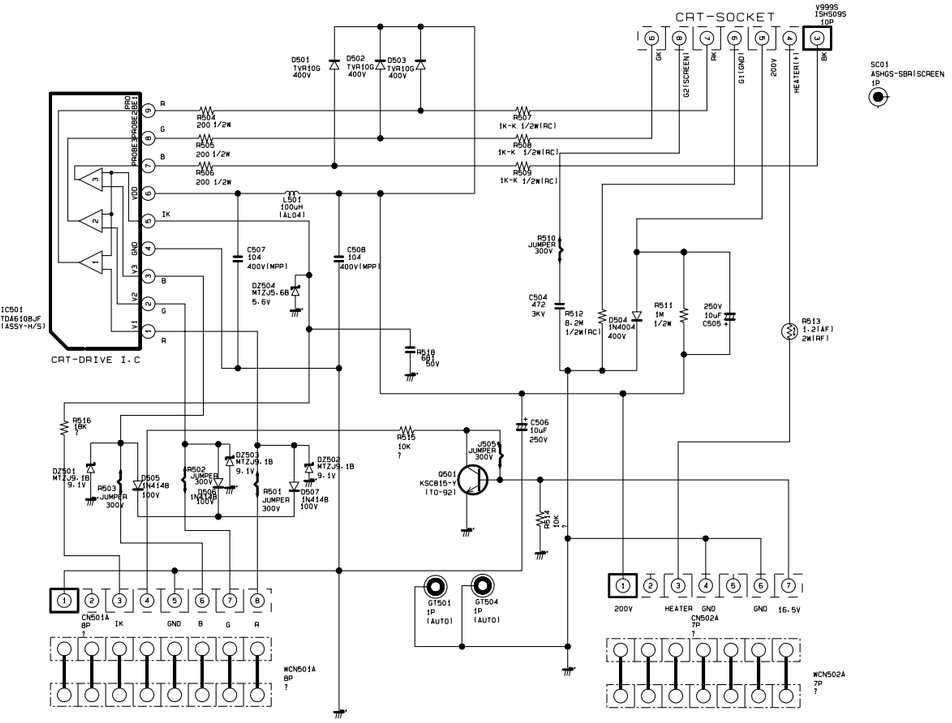

ASSY-PCB, MASTER
(OPTION)
GT803
1P
GT801
1P
GT802
1P
GT02A
1P
PD811S
KJP-140
8FT
GT01A
1P
GT03A
1P
CN01A
SW811S
250V/5A
JPW2104B
AC 230V
OPTION
(FREE VOLT AREA;AC90V-260V 50/60Hz)

9-3 CHROMA

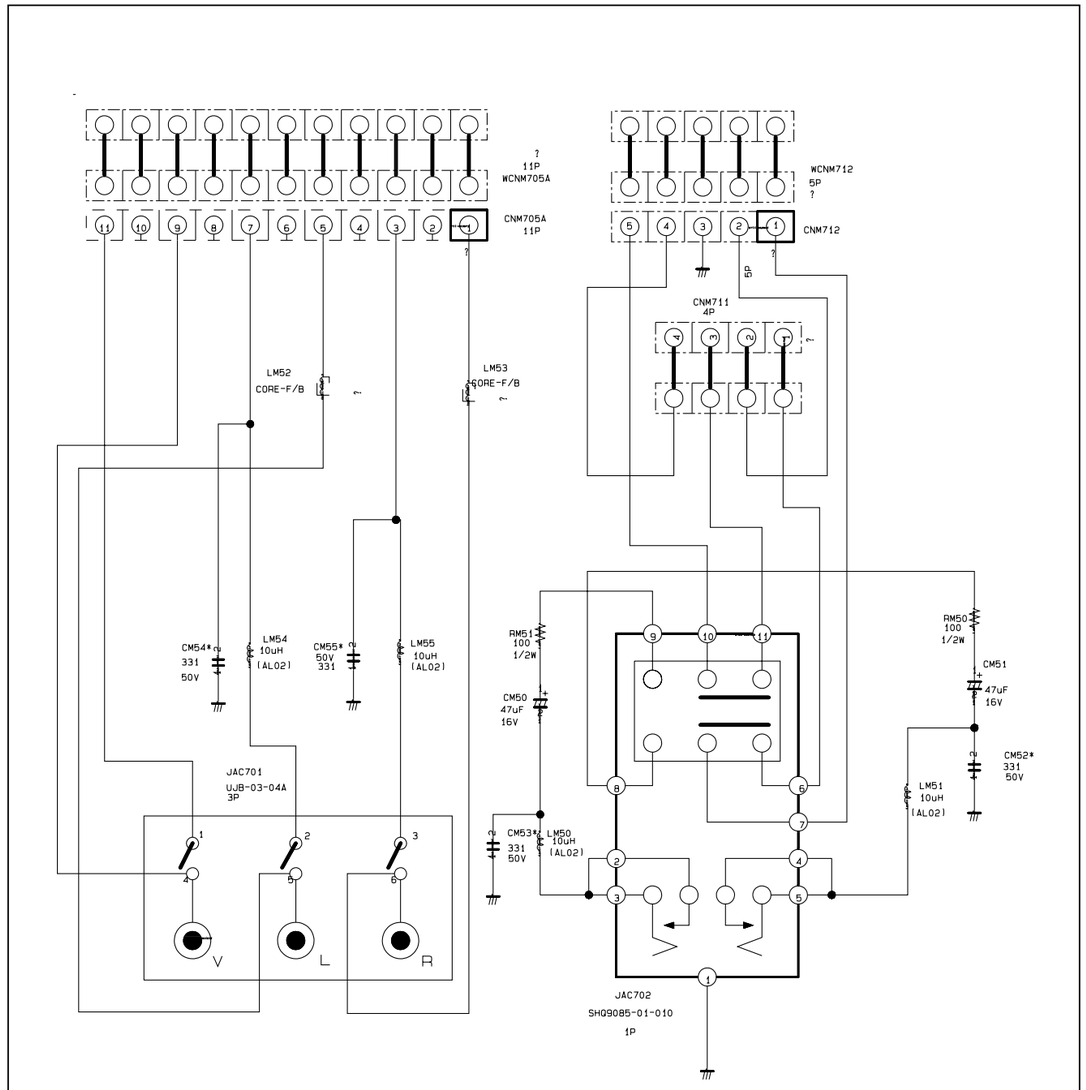

IC201S
TDA8889H
(QFP)
21 INCH OPTION
28 INCH OPTION
IC202
SAA4981
(DIP)
IC204
2210
(SOP)
Q203
BC848C
(CHIP)
Q204
BC848C
(CHIP)
FROM/TO DI JACK
FROM/TO MAIN
TO CRT
CN201
15P
CN202
16P
CN203
8P
BK201
M2160
BK202
M2160
SCART F/B IN
SCART-B
SCART-G
SCART-R
OSD F/B IN
OSD B IN
OSD G IN
OSD R IN
CLAMP
LPF5.0
LPF6.7
SC-D 770TAPS
MUX SC DELAY LINES
CLAMP REF.
H SUPARLION
54MHz H-PLL
CONTROLLER
This drawing is property of SEC
Use or copy of this drawing without proper permission from the appropriate technical-document managing department is prohibited.
TITLE 28WIDE CHROMA BLOCK
DRAWER
SAMSUNG Doc. CODE 2000/04/25 Rev. No REV00 SHEET NO /

9-4 CRT

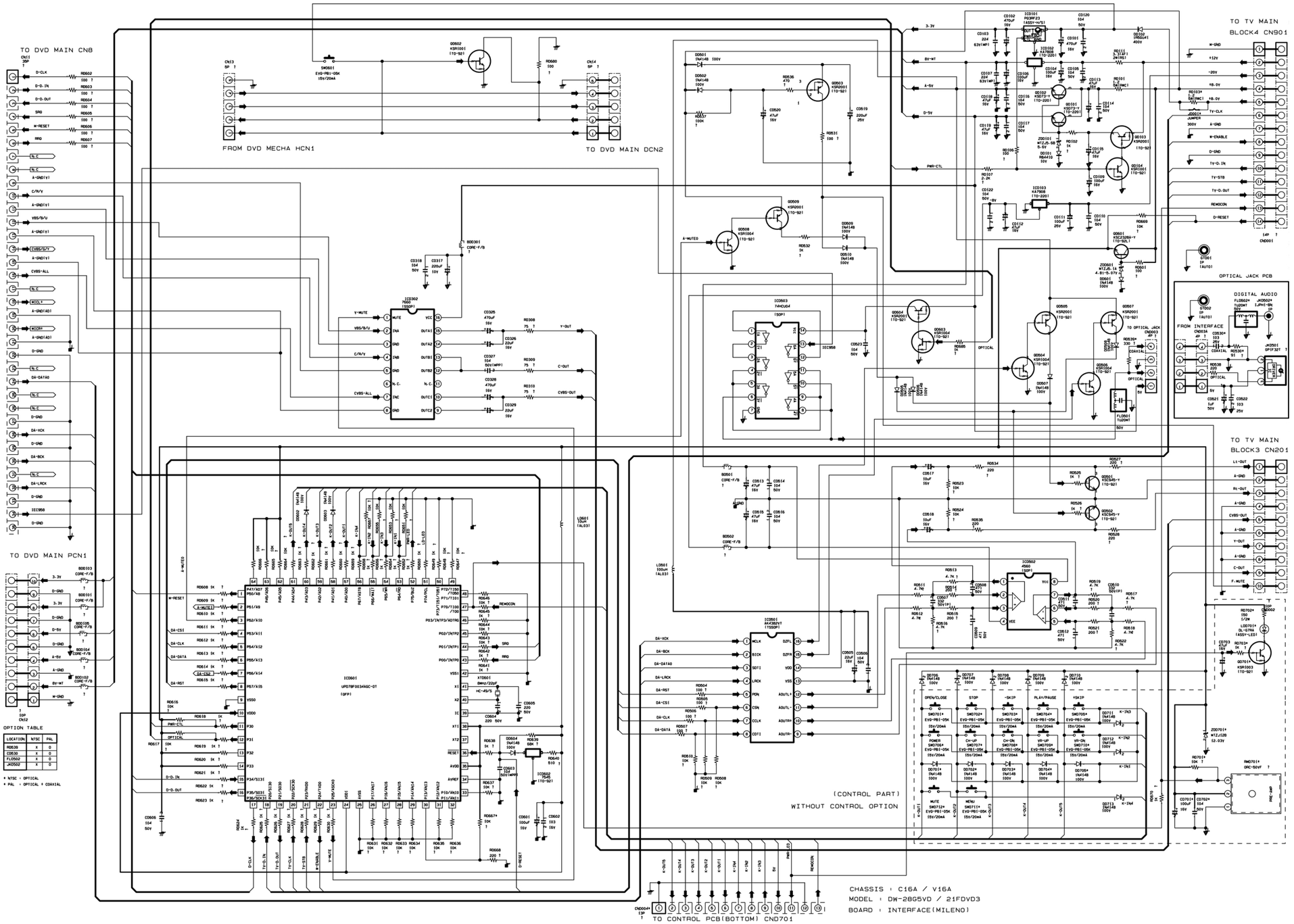
This drawing is property of SEC
Use or copy of this drawing without proper permission form the appropriate
technical-document managing department is prohibited.



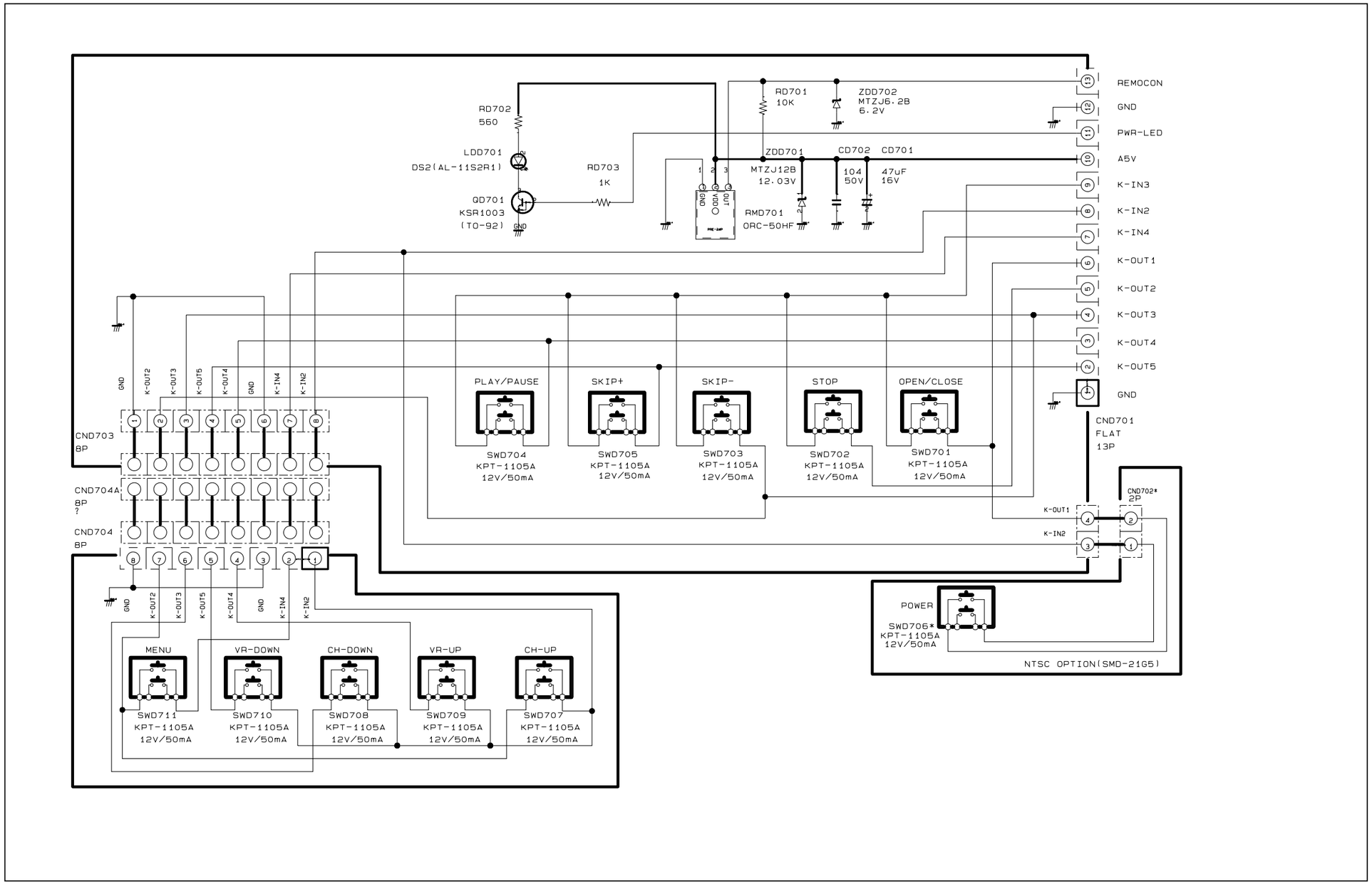
9-5 A/V



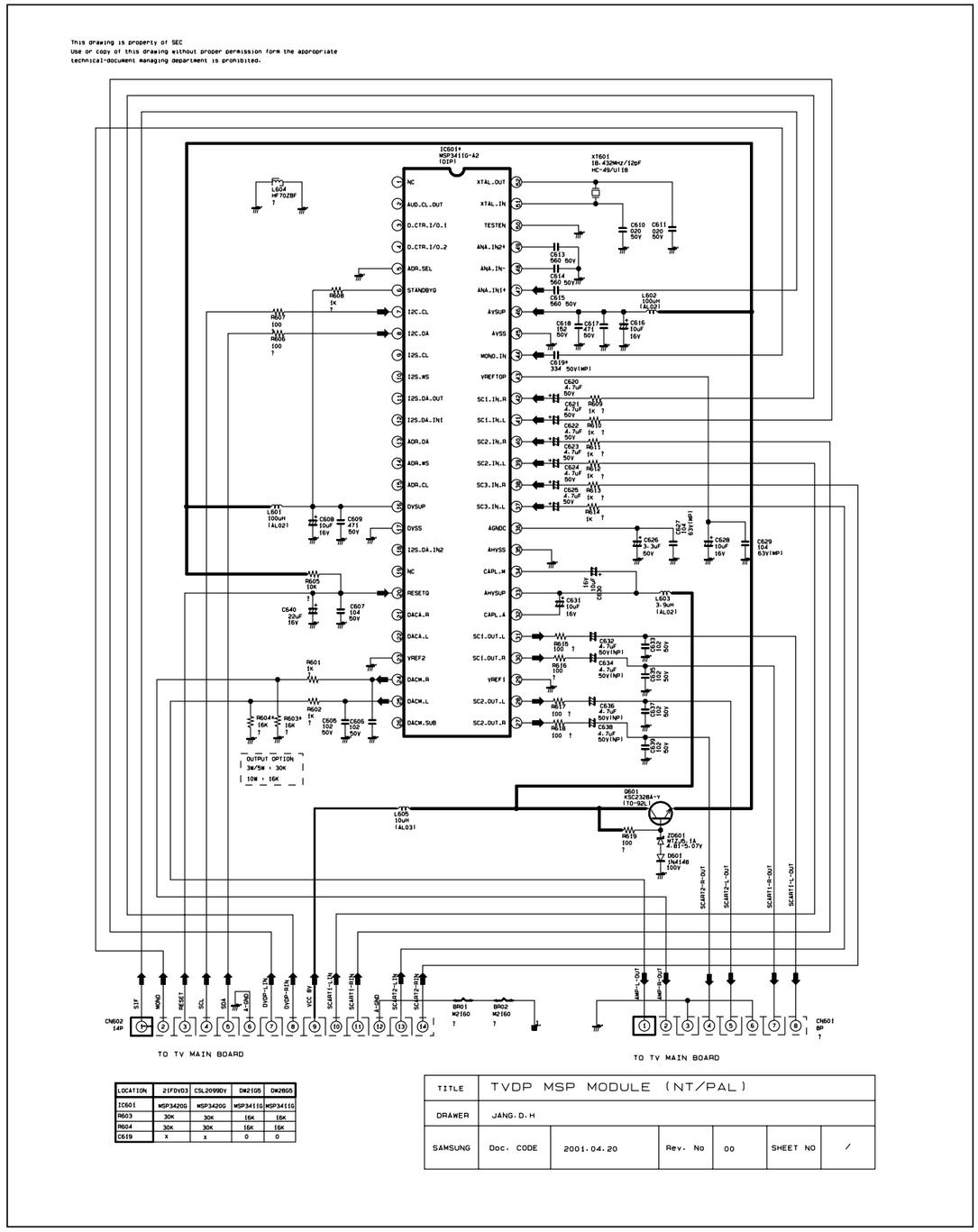
9-6 INTERPACE


TO DVD MAIN CN8
FROM DVD MECHA HCN1
TO DVD MAIN DCN2
TO DVD MAIN PCN1
OPTION TABLE
LOCATION | NTSC | PAL
RD535 | X | 0
CD530 | X | 0
FLD502 | X | 0
JKD502 | X | 0
* NTSC : OPTICAL
* PAL : OPTICAL + COAXIAL
TO TV MAIN BLOCK4 CN901
OPTICAL JACK PCB
DIGITAL AUDIO
FROM INTERFACE
TO TV MAIN BLOCK3 CN201
(CONTROL PART)
WITHOUT CONTROL OPTION
TO CONTROL PCB(BOTTOM) CND701
CHASSIS : C16A / V16A
MODEL : DW-28G5VD / 21FDVD3
BOARD : INTERFACE(MILENO)

9-7 CONTROL


RD702
560
LDD701
DS2(AL-11S2R1)
QD701
KSR1003
(TO-92)
GND
RD703
1K
RD701
10K
ZDD702
MTZJ6.2B
6.2V
ZDD701
MTZJ12B
12.03V
CD702
104
50V
CD701
47uF
16V
RMD701
ORC-50HF
GND
VDD
OUT
REMOCON
GND
PWR-LED
A5V
K-IN3
K-IN2
K-IN4
K-OUT1
K-OUT2
K-OUT3
K-OUT4
K-OUT5
GND
CND701
FLAT
13P
PLAY/PAUSE
SKIP+
SKIP-
STOP
OPEN/CLOSE
SWD704
KPT-1105A
12V/50mA
SWD705
KPT-1105A
12V/50mA
SWD703
KPT-1105A
12V/50mA
SWD702
KPT-1105A
12V/50mA
SWD701
KPT-1105A
12V/50mA
CND703
8P
CND704A
8P
?
CND704
8P
GND
K-OUT2
K-OUT3
K-OUT5
K-OUT4
GND
K-IN4
K-IN2
CND702*
2P
K-OUT1
K-IN2
POWER
SWD706*
KPT-1105A
12V/50mA
MENU
VR-DOWN
CH-DOWN
VR-UP
CH-UP
SWD711
KPT-1105A
12V/50mA
SWD710
KPT-1105A
12V/50mA
SWD708
KPT-1105A
12V/50mA
SWD709
KPT-1105A
12V/50mA
SWD707
KPT-1105A
12V/50mA
NTSC OPTION(SMD-21G5)

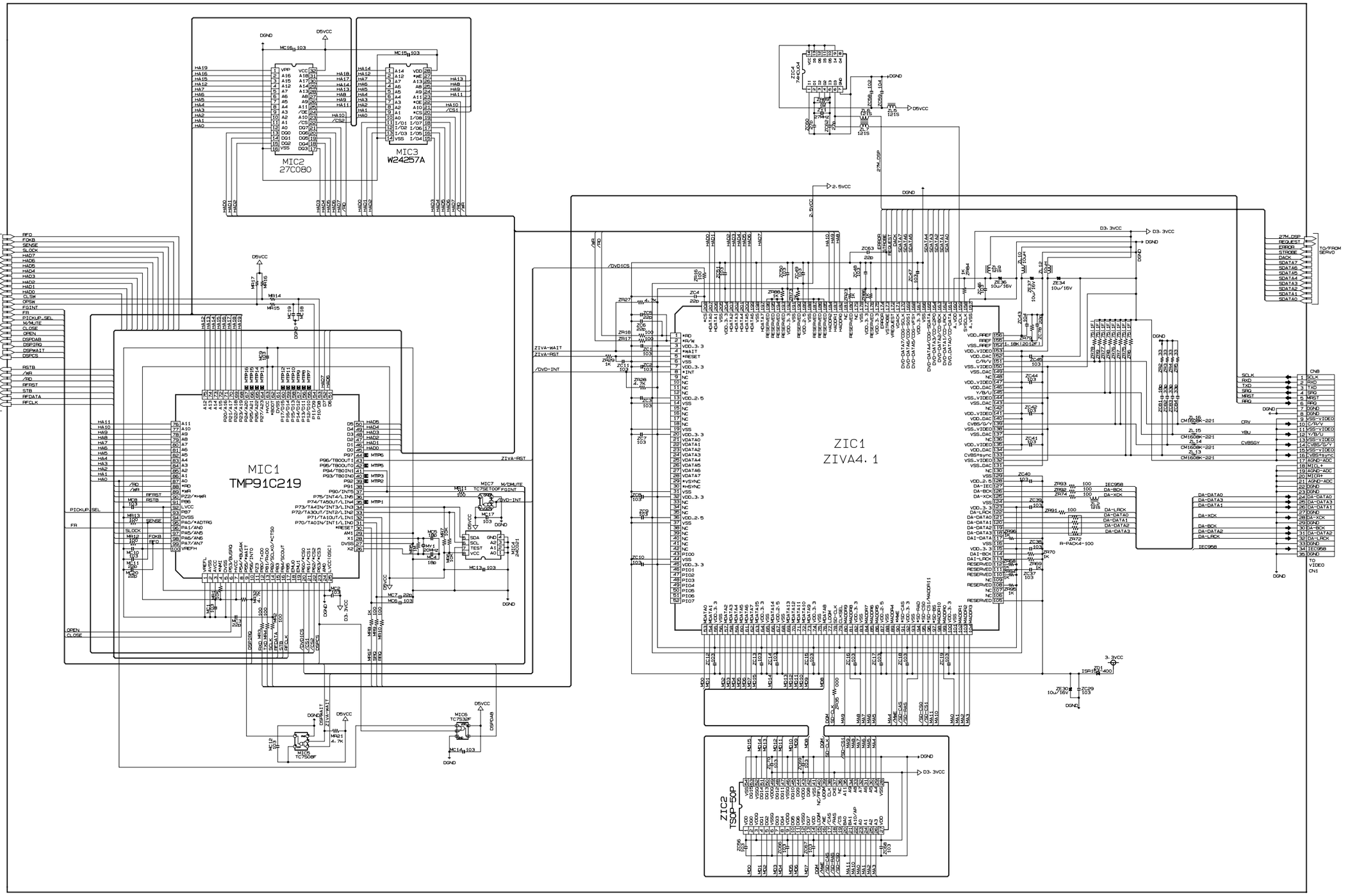
9-8 SOUND



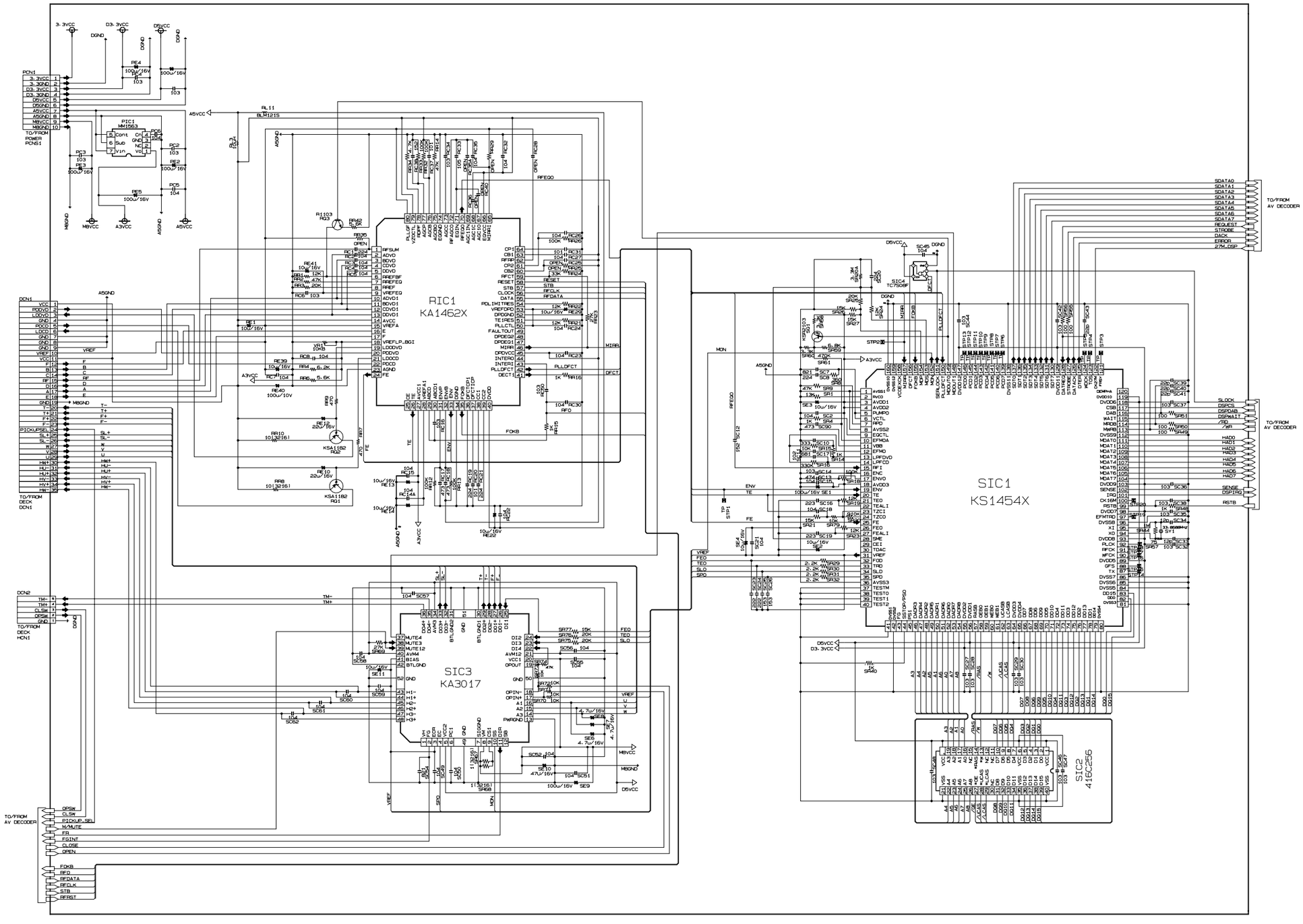
LOCATION	21FDVD3	CSL2099DV	DW21G5	DW28G5
IC601	MSP3420G	MSP3420G	MSP3411G	MSP3411G
R603	30K	30K	16K	16K
R604	30K	30K	16K	16K
C619	x	x	0	0

TITLE	TVDP MSP MODULE (NT/PAL)					
DRAWER	JANG.D.H					
SAMSUNG	Doc. CODE	2001.04.20	Rev. No	00	SHEET NO	/

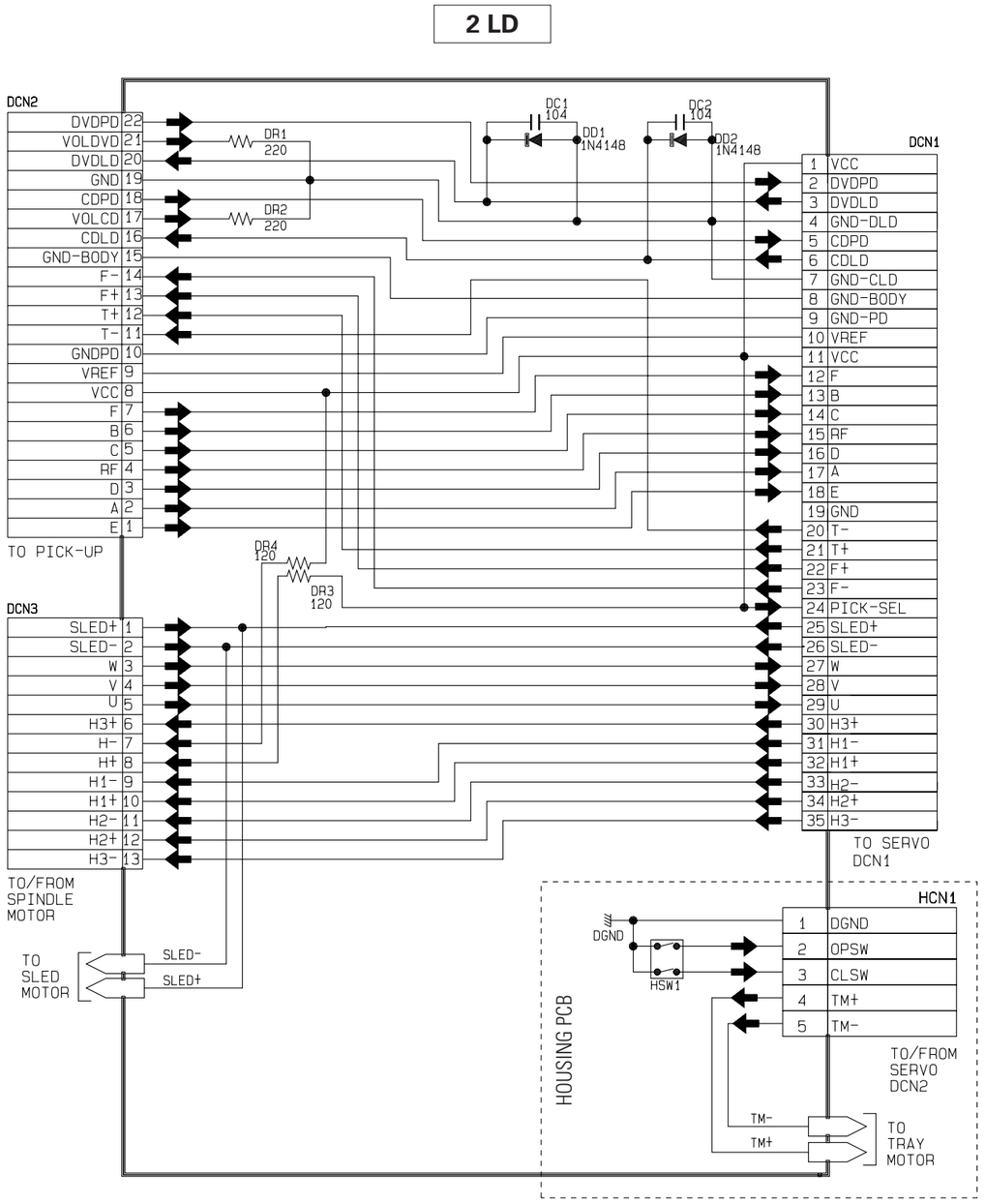
9-9 AV-Decoder/DVD-Micom



9-10 SERVO


RIC1
KA1462X
SIC1
KS1454X
SIC2
416C256
SIC3
KA3017
SIC4
TC7S08F
TO/FROM
DECK
DCN1
TO/FROM
POWER
PCN1
TO/FROM
AV DECODER
TO/FROM
DECK
HCN1
TO/FROM
AV DECODER
3.3VCC
D3.3VCC
D5VCC
DGND
A5VCC
A3VCC
A5GND
M5VCC
M3VCC
M5GND
M3GND
VREF
MIRR
DFCT
FOKB
RFEQO
MON
ENV
TE
FE
SPD
SLD
FEO
TEO
SLO

9-11 DVD-DECK


2 LD
DCN2
DVDPD 22
VOLDVD 21
DVDLD 20
GND 19
CDPD 18
VOLCD 17
CDLD 16
GND-BODY 15
F- 14
F+ 13
T+ 12
T- 11
GNDPD 10
VREF 9
VCC 8
F 7
B 6
C 5
RF 4
D 3
A 2
E 1
TO PICK-UP
DR1 220
DR2 220
DC1 104
DD1 1N4148
DC2 104
DD2 1N4148
DR4 120
DR3 120
DCN1
1 VCC
2 DVDPD
3 DVDLD
4 GND-DLD
5 CDPD
6 CDLD
7 GND-CLD
8 GND-BODY
9 GND-PD
10 VREF
11 VCC
12 F
13 B
14 C
15 RF
16 D
17 A
18 E
19 GND
20 T-
21 T+
22 F+
23 F-
24 PICK-SEL
25 SLED+
26 SLED-
27 W
28 V
29 U
30 H3+
31 H1-
32 H1+
33 H2-
34 H2+
35 H3-
TO SERVO DCN1
DCN3
SLED+ 1
SLED- 2
W 3
V 4
U 5
H3+ 6
H- 7
H+ 8
H1- 9
H1+ 10
H2- 11
H2+ 12
H3- 13
TO/FROM SPINDLE MOTOR
TO SLED MOTOR
SLED-
SLED+
HCN1
DGND
HSW1
1 DGND
2 OPSW
3 CLSW
4 TM+
5 TM-
TO/FROM SERVO DCN2
TM-
TM+
TO TRAY MOTOR
HOUSING PCB

9-12 Chief IC PIN voltage

IC901 SAA5565PS-OTP

—	PIN NAME	PIN NO.	PIN NO.	PIN NAME	—
4.6 V	SW1	1	52	SDA	2.2 V
3.3 V	D-RESET	2	51	SCL	2.3 V
3.3 V	B-STOP	3	50	D-CLOCK	4.9 V
0.4 V	D1-CON	4	49	TV-OUT	4.9 V
0.4 V	SW2	5	48	STROBE	1V V/AC
0.4 V	S-MUTE1	6	47	V-SYNC INTEAAUP	0.4 V
3.3 V	W-ENABLE	7	46	TV-IN	5 V
3.2 V	TILT	8	45	IR	5 V
0.1 V	SC1-ID	9	44	VDP	3.3 V
–	N.C	10	43	RESET	
2.6 V	AFT	11	42	X_OUT	1.63V
0.1 V	SC2-ID	12	41	X_IN	1.5 V
	GND	13	40	OSC_GND	
0V	PANORAMA	14	39	VDDC	3.3V
	N.C	15	38	VSSP	
	N.C	16	37	V_SYNC	0.4 V
0.4 V	D-COIL	17	36	H_SYNC	0.7 V
0V	S-MUTE2	18	35	F/B	2.8 V
0.02V	WIDE-CTL	19	34	R	0.62V
	TV-POWER	20	33	G	0.62V
	N.C	21	32	B	0.62V
	GND	22	31	VDDA	3.2 V
	N.C	23	30	MIX	0.2 V
1 V	CVBS	24	29	H-TONE	5 V
0.25V	BLACK	25	28	GND	
1.3 V	IREF	26	27	NC	

IC902 21C16

—	PIN NAME	PIN NO.	PIN NO.	PIN NAME	—
GND	A0	1	8	VDD	5 V
GND	A1	2	7	WC	
GND	A2	3	6	SCL	2.3 V
GND	VSS	4	5	SDA	2.2 V

IC301 LA7845

PIN NO.	PIN NAME	—
1	GND	-13.73V
2	OUT	0.2V
3	OUT	17.14V
4	VDN	1.05V
5	VDP	1.03V
6	VCC	16.86V
7	PUMP UP	11.91V

CHROMA MODULE

PIN NO.	PIN NAME	—
1	F/B	
2	R	
3	G	
4	B	
5	GND	
6	D1CTC	
7	SCL	2.3V
8	SDA	2.2V
9	GND	
10	Y-IN	2.4V
11	C-IN	2.4V
12	GND	
13	CVBS-OUT	1.1V
14	WIDE CTC	
15	PC5V	5V
1	F/B-O	
2	B	
3	G	
4	R	
5	HALF	5 V
6	FSC	4 V
7	V-OUT	2.3 V
8	V+OUT	1V
9	H-OUT	1.1V
10	EHT-F/S	1 V
11	ABL	1.8V
12	FBP-IN	2V
13	CVBS	1.4V
14	GND	
15	EW	3.4 V
16	PC8V	8 V

AUDIO MODULE

PIN NO.	PIN NAME	—
1	SIF	2V
2	MONO	
3	RESET	
4	SCL	2V
5	SDA	2V
6	GND	
7	D-L	
8	D-R	8V
9	8V	
10	1-L	
11	1-R	
12	2-L	
13	2-R	
14	GND	
1	L-OUT	
2	R-OUT	
3	GND	
4	2-OL	
5	2-OR	
6	GND	
7	1-OL	6V
8	1-OR	6V
9		
10		

PLAY MODE

ICD501 AK4382 VT

–	PIN NAME	PIN NO.		PIN NAME	VOL.
GND	MCLK	1	16	DZFL	GND
3.23V	BLCK	2	15	DZFR	GND
1.6V	SOTI	3	14	VDD	GND
2.44V	LRCK	4	13	VSS	GND
1.6V	PDN	5	12	A-OUTL+	2.59V
1.6V	CSN	6	11	A-OUTL-	2.59V
1.6V	CCLK	7	10	A-OUTR+	2.59V
2.44V	CDTI	8	9		2.59V

ICD502 BA4560

–	PIN NAME	PIN NO.		PIN NAME	–
0V	OUT1	1	16	VCC	8V
1.41V	IN1-	2	15	OUT2	0V
1.41V	IN1+	3	14	NI2-	1.33V
0V	VEE	4	13	NI2+	1.33V

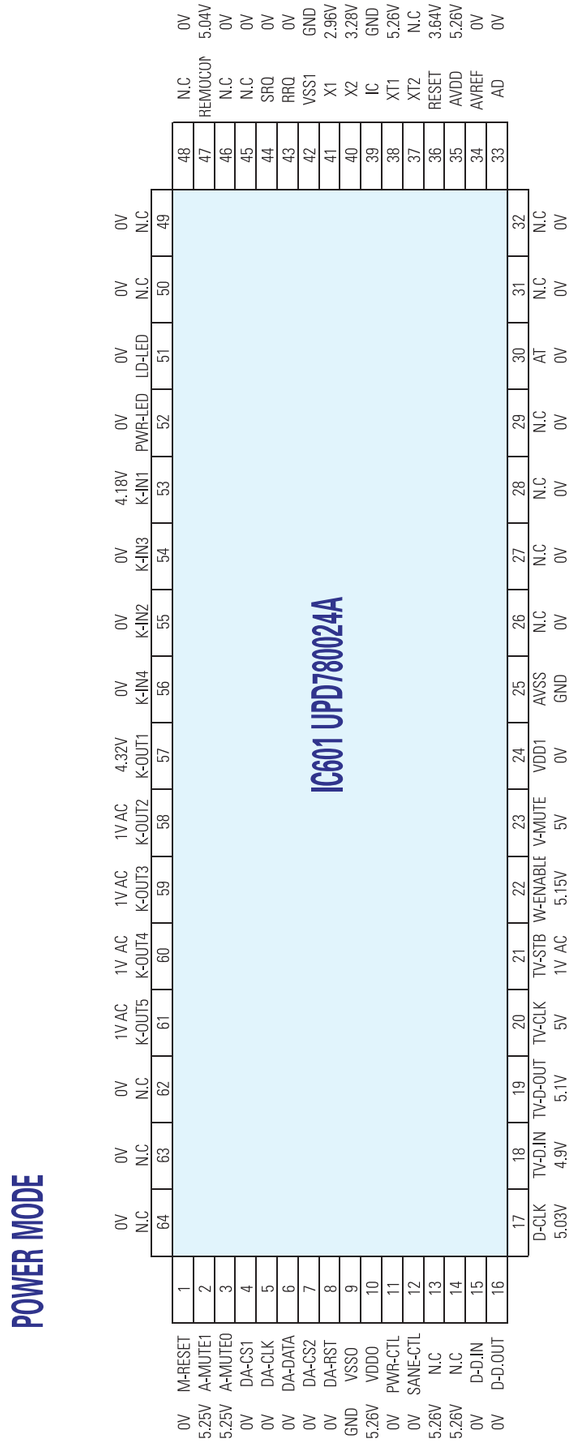
ICD503 74HCU04

–	PIN NAME	PIN NO.		PIN NAME	–
2.67V	A1	1	14	VCC	4.98V
2.43V	Y1	2	13	A6	1.6V
2.43V	A2	3	12	Y6	2.67V
2.53V	Y2	4	11	A5	2.53V
2.53V	A3	5	10	Y5	2.44V
2.44V	Y3	6	9	A4	2.53V
GND	GND	7	8	Y4	2.44V

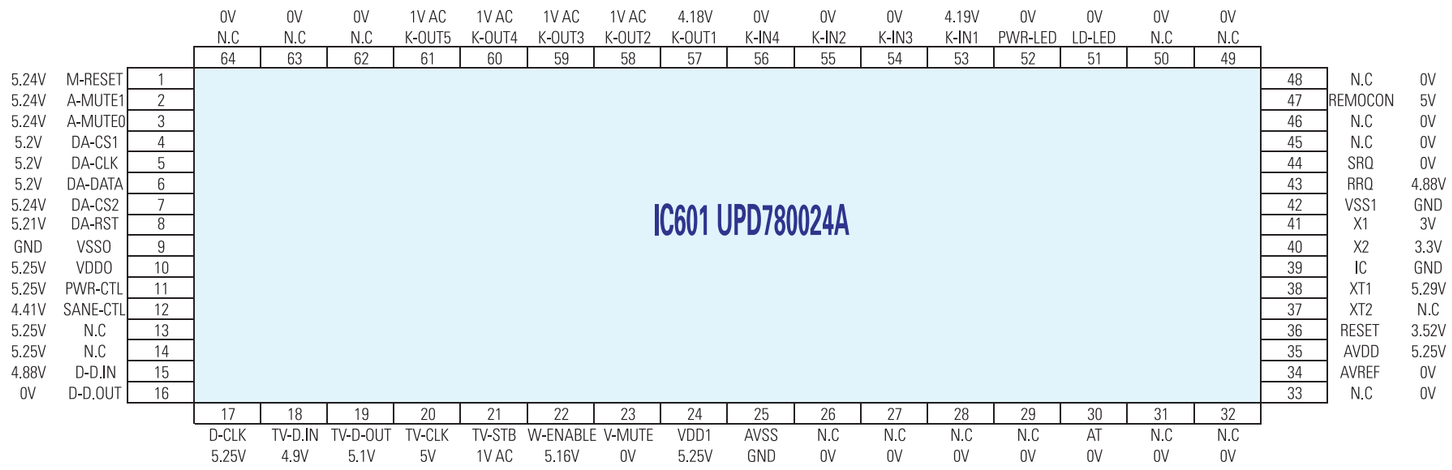
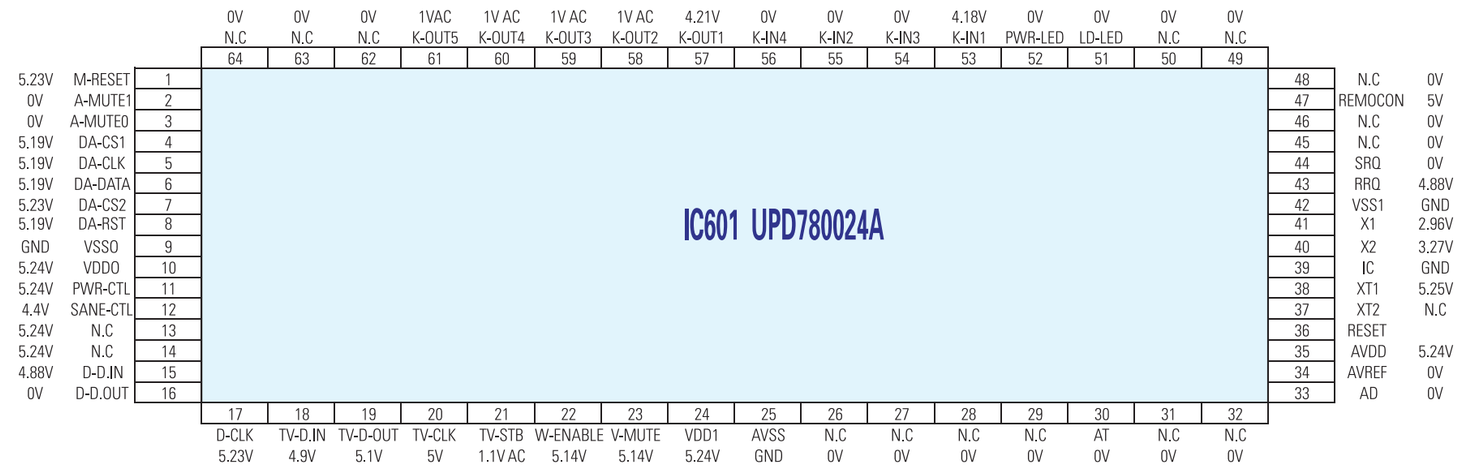
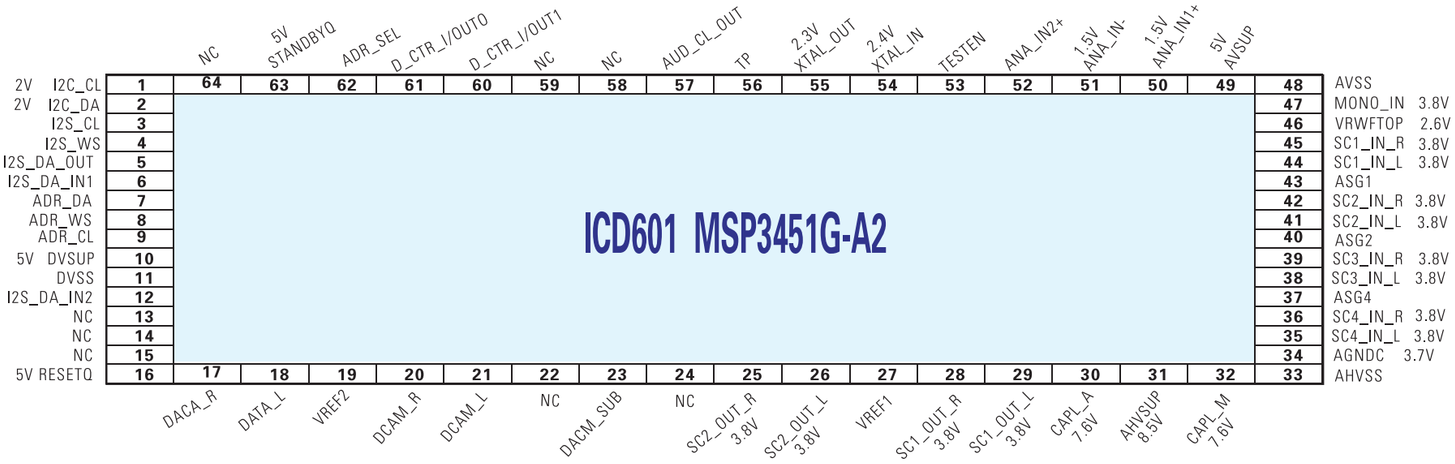
ICD 302 7660

–	PIN NAME	PIN NO.		PIN NAME	–
0 V	MUTE	1	16	VCC	4.97V
0.6 V	IN-A	2	15	OUT-A1	1.6V
GND	GND	3	14	OUT-A2	1.6V
0.5 V	IN-B	4	13	OUT-B1	1.83V
GND	GND	5	12	OUT-B2	1.83V
0.1V AC	N.C	6	11	N.C	0V
0.57V	IN-C	7	10	OUT-C1	1.98V
0 V	GND	8	9	OUT-C2	1.8V

POWER MODE



STOP MODE



PLAY MODE